



# H Y P E R C H I P B U S I N E S S S U M M A R Y

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Hyperchip Inc. is a Montreal-area company incorporated in September 1997 after 10 years of patent works and 4 years of proof-of-concept work. Hyperchip is privately owned by its management team and by its investors, including TechnoCap, a leading technology venture capital company that represents some of Canada's largest institutional investors. TechnoCap's founding shareholders are Sofinov of the Caisse de Dépôt et Placement de Québec, the Fiducie Bombardier Trust; the Fonds de Solidarité des Travailleurs du Québec Fund; Desjardins; CapiTech of Hydro-Québec, Innovatech of Greater Montreal; the National Bank of Canada and Capital TechnoCap.

Hyperchip has developed a revolutionary computer and communications architecture based on **massively parallel semiconductors**. This **Hyperchip™ architecture** produces a tremendous increase in system performance while reducing complexity and costs. While traditional architectures divide systems into a large number of different chips, each with a few extremely complex functional units, the scalable Hyperchip™ architecture builds a complete system from a network of identical chips, each of which contains a repetitive array of simple and highly efficient cells. In addition to greatly reducing system size, cost and power consumption, and eliminating serial processing bottlenecks by allowing hundreds of units per chip to cooperate on a parallel task, the Hyperchip™ architecture greatly reduces design costs and times by leveraging the massive replication of very simple units.

The Hyperchip™ architecture can be applied to many types of computer and communications components, creating compact memory systems, petabit network switches and routers, ultra-fast graphics accelerators, inexpensive parallel processing units and massively parallel processing server arrays. Hyperchip™ designs thus offer a way for today's systems to benefit from the versatility, performance, and compactness of the Hyperchip™ architecture while capitalizing on the existing wafer/chip/board infrastructure.

The Hyperchip™ architecture includes major advances in a number of key computer technologies. Due to its pioneering research, Hyperchip has **broad patent coverage** pending on all of these advances, and has already received full patent allowance in the U.S. on four key areas. Additional patent coverage is pending in the major North American, European, and Asian economies. A

and large cost and performance advantages across much of the \$88 billion/year computer and communications semiconductor industry gives Hyperchip the potential to grow to a multi-billion dollar company.



## The Mission

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### **To make extreme performance synonymous with Hyperchip.**

Hyperchip will achieve this by bringing the tremendous benefits of massively parallel semiconductors to computer and communications users everywhere. Since the Hyperchip™ architecture can create systems far more powerful than today's complex component architectures by eliminating serial processing and connectivity bottlenecks, it provides the most leverage in high-end products that exploit this potential. By focusing on rapidly growing markets where Hyperchip™ technology provides a huge advantage over current technologies, Hyperchip will achieve rapid growth. Major markets will include telecommunications, server and storage farms for eCommerce, local-area networks, and commercial scalable parallel processing.

In commodity markets where economies of scale are critical, Hyperchip will license to or form strategic partnerships with established companies rather than marketing products directly. This will let Hyperchip capitalize on the infrastructures and expertise of established companies without incurring the associated overhead costs.

Because the Hyperchip™ architecture is based on rearranging existing circuits into simple units rather than on creating new circuits or complex units, the cost of developing Hyperchip implementations is quite modest by high-performance chip design standards. The transformation from designs to initial products will require \$8.5 million, with first product ship in third quarter 1999. Hyperchip has raised \$6.75 million in angel and venture capital funding for this; which is being leveraged with over \$3 million through R&D tax credits and a \$500,000 CANARIE award, plus technology development programs and commercialization loans. Hyperchip should achieve profitability soon after product launch, and will hold a dominant position in several multi-billion dollar markets with high profit margins within five years.



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